Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of the claims in this application:

Listing of Claims:

Claim 1 (Currently amended): A method for preparing a biological compatible polymer scaffold for growing mammalian cells in situ when such scaffold is placed in a human which comprises ~~A method of enabling growth of mammalian cells, which method comprises~~: supplying liquid comprising biologically compatible polymer to a liquid outlet in the vicinity of a surface and subjecting said biologically compatible polymer liquid supplied to said outlet and issuing from the outlet to an electric field to cause said ~~the~~ liquid to form polymer fibre which is attracted to and deposits onto the surface to form a polymer fibre scaffold ~~having fibre~~ having a fibre diameter of from about 0.2 µm to about 100 µm and a fibre gap size of from 2.0 µm to about 500 µm ~~of a given diameter with gaps between adjacent fibre portions~~; ~~and~~ applying mammalian cells to the fibre scaffold, wherein the mammalian cell diameter is from 5 to 10 times greater than the fibre diameter ~~the method further comprises selecting a size of the gaps between the fibre portions and a size of the fibre diameter relative to a diameter of the mammalian cells~~ so as to facilitate at least one cell processes selected from the group consisting of attachment, movement, growth, proliferation, and differentiation ~~growth preferentially along the fibre portions, attachment to the fibre portions, elongation preferentially along the fibre portions, and differentiation~~.

Claim 2 (Currently amended): The ~~A~~ method according to claim 1, wherein the fibre diameter is comparable to or smaller than the cell diameter.

Claim 3 (Currently amended): The ~~A~~ method according to claim 1, wherein the cell diameter is from 1 to 20 times the fibre diameter.

Claim 4 (Currently amended): The ~~A~~ method according to claim 1, wherein the cell diameter is from 5 to 10 times greater than the fibre diameter.

Claim 5 (Currently amended): The ~~A~~ method according to claim 1, wherein the cell diameter is in the range from about 2 to about 20 microns and the fibre diameter is in the range from about 1 to 2 microns.

Claim 6 (Currently amended): The ~~A~~ method according to claim 1, wherein the cell diameter is about 10 microns and the fibre diameter is from 1 to 2 microns.

Claim 7 (Currently amended): The ~~A~~ method according to claim 1, wherein the fibre diameter is from 1 to 2 microns.

Claim 8 (Currently amended): The ~~A~~ method according to claim 1, wherein the relative sizes of the cell and fibre diameters are such that the fibre surface appears curved to the cells.

Claim 9 (Currently amended): The ~~A~~ method according to claim 1, wherein the fibre diameter is of comparable size to cell surface receptors of the cells.

Claim 10 (Currently amended): The ~~A~~ method according to claim 1, wherein the polymer is selected from the group consisting of ~~a composition comprising ethyl acetate, isopropyl alcohol, amyl acetate, isobutyl alcohol, denatured alcohol, camphor, and nitrocellulose;~~ polylactide. (L:D isomer ratio 50:50)~~;~~ and polylactide (L:D isomer ratio 96:4).

Claim 11 (Currently amended): The ~~A~~ method according to claim 1, wherein the cells are human adherent cells.

Claim 12 (Currently amended): The ~~A~~ method according to claim 1, wherein the cells are human fibroblast cells.

Claim 13 (Currently amended): The ~~A~~ method according to claim 1 wherein the mammalian cells include human fibroblast cells, and the polymer fibre scaffold has fibre ~~of~~ diameter in ~~a~~ the range of 1 to 2 microns with gaps between adjacent fibre portions.

Claim 14 (Currently amended): A method for preparing a biological compatible polymer scaffold for growing human fibroblast cells in situ when such scaffold is placed in a human which comprises: ~~A method of facilitating at least one cell process of human fibroblast cells, which method comprises:~~ supplying a liquid comprising a biologically compatible polymer to a liquid outlet in the vicinity of a surface and subjecting the biologically compatible polymer liquid supplied to said outlet and issuing from the outlet to an electric field to cause the liquid to form a polymer fibre which is attracted to and deposits onto said surface to form a polymer fibre scaffold comprising a three-dimensional continuous network of intercommunicating fibre portions ~~having a fibre diameter~~ with gaps between adjacent fibre portions said gaps being in the range of from about 2.0 μm to about 500 μm and wherein the diameter of the polymer fibres is from about 1.0 μm to about 2.0 μm; ~~and~~ applying the human fibroblast cells to the fibre scaffold; ~~the method further comprising selecting the fibre diameter to be in a range of 1-2 microns a the gaps between the fibre portions to be in the range of from about 2.0~~ wherein said ~~such that the~~ human fibroblast cells grow or elongate preferentially along the fibres of the fibre scaffold, ~~wherein the biologically compatible polymer is selected from the group consisting of a composition comprising ethyl acetate, isopropyl alcohol, amyl acetate, isobutyl alcohol, denatured alcohol, camphor, and nitrocellulose; and polylactide~~.

Claim 15 (Currently amended): The ~~A~~ method according to claim 20 wherein the mammalian cells comprise human bone marrow fibroblast cells, and wherein the mean fibre diameter of fibres in the ~~a~~ polymer fibre scaffold is about 3 microns with the mean size of gaps between adjacent fibre portions of about 16 microns.

Claim 16 (Currently amended): A method for preparing a biological compatible polymer scaffold for facilitating differentiation of stem cells in situ when such scaffold is placed in a human which comprises: ~~A method of providing an environment for facilitating differentiation of stem cells, which method comprises:~~ supplying liquid comprising a biologically compatible polymer to a liquid outlet in the vicinity

of a surface; subjecting said biologically compatible polymer liquid supplied to said outlet and issuing from the outlet to an electric field to cause the liquid to form polymer fibre which is attracted to and deposits onto the substrate to form a polymer fibre scaffold comprising a three-dimensional continuous network of intercommunicating fibre portions; wherein the fiber diameter is about 25 μm and the gap size is from about 150 μm to about 200 μm; ~~and selecting a fibre of diameter and a gap between said fibres portions that~~, applying said stem cells to said polymer fibre scaffold without addition of extrinsic biological factors~~, facilitates differentiation~~.

Claim 17 (Cancelled)

Claim 18 (Currently amended): A method for preparing a biological compatible polymer scaffold for facilitating differentiation of human bone marrow fibroblastic cells in situ when such scaffold is placed in a human which comprises: ~~A method of facilitating differentiation of osteogenic stem cells, which method comprises:~~ supplying a liquid comprising a biologically compatible polymer to a liquid outlet in the vicinity of a surface and subjecting said biologically compatible polymer liquid supplied to said outlet and issuing from the outlet to an electric field to cause the liquid to form polymer fibres which are ~~is~~ attracted to and deposit~~s~~ onto the substrate to form a polymer fibre scaffold comprising a three-dimensional continuous network of intercommunicating fibre portions, wherein ~~the method further comprising selecting a~~ the fibre portions have a fibre diameter of ~~diameter of~~ about 3~~10~~ microns and ~~selecting gaps~~ a gap between adjacent fibre portions of about 16 microns; ~~and~~ applying the cells to the fibre scaffold without addition of extrinsic biological factors wherein ~~, the selecting of the fibre diameter and gaps resulting~~ after a period of time, in the resulting cells having a morphology resembling nerve cells.

Claim 19 (Currently amended): The ~~A~~ method according to claim 16, wherein the polymer comprises polycaprolactone.

Claim 20 (Currently amended): A method for preparing a biological compatible polymer scaffold for growing mammalian cells in situ when such scaffold is placed in a human which comprises: ~~A method of facilitating at least one cell process of mammalian cells, which method comprises:~~ supplying liquid comprising a solution of a biologically compatible polymer to a liquid outlet in the vicinity of a surface

and subjecting said biologically compatible polymer liquid supplied to said outlet and issuing from the outlet to an electric field to cause the liquid to form polymer fibre which is attracted to and deposits onto the substrate to form a polymer fibre scaffold comprising a three-dimensional continuous network of intercommunicating fibre portions, the method further comprising selecting a fibre diameter in the range from about 0.2 μm to about 100 μm ; ~~microns~~ and a gap size of from about 10 μm to about 500 μm; applying mammalian cells to the fibre scaffold, ~~the and selecting the fibre diameter and gap size~~ to facilitate ~~facilitating~~ at least one cell process selected from the group consisting of growth preferentially along the fibre portions, attachment to the fibre portions, elongation preferentially along the fibre portions, and differentiation.

Claim 21 (Cancelled)

Claim 22 (Currently amended): The ~~A~~ method according to claim 1, wherein the polymer formulation is a polymer solution. emulsion or suspension.

Claim 23 (Cancelled)

Claim 24 (Currently amended):): A method for preparing a biological compatible polymer scaffold for growing mammalian cells in situ when such scaffold is placed in a human which comprises: ~~A method of forming a fibre scaffold for facilitating at least one cell process of mammalian cells which method comprises:~~ supplying ~~comprising~~ biologically compatible ~~molten or~~ liquid polymer to a liquid outlet in the vicinity of a surface and subjecting said biologically compatible ~~molten or~~ liquid polymer supplied to said outlet and issuing from the outlet to an electric field to cause the liquid to form polymer fibre which is attracted to and deposits onto the substrate to form a polymer fibre scaffold having fibre of a diameter of from abut 20 μm to about 70 μm and a gap size between adjacent fiber portions of from about 100 μm to about 500 μm wherein said fibre scaffold comprises ~~comprising~~ a three-dimensional continuous network of intercommunicating fibre portions.~~, the method further comprising selecting, so as to facilitate at least one cell process of mammalian cells wherein said having fibre of a diameter is in the range of from 20 to 70 microns and wherein a gap size between adjacent fibre portions is in the range of 100 to 500 microns.~~

Claim 25 (Currently amended): The ~~A~~ method according to claim 24, wherein the fibre scaffold is arranged to be implanted in a mammalian body or placed on or in a wound.

Claim 26 (Currently amended): The ~~A~~ method according to claim 24, wherein the surface is a target area of a mammalian body such as a wound and the fibre scaffold is produced in situ.

Claim 27 (Currently amended): The ~~A~~ method according to claim 1 wherein the cells are applied by a seeding process.

Claim 28 (Currently amended): The ~~A~~ method according to claim 1 wherein the cells are applied by spraying.

Claim 29 (Currently amended): The ~~A~~ method according to claim 1 which comprises preparing a liquid formulation suitable for enabling cells to be applied to the fibre scaffold by subjecting the liquid formulation to an electric field to cause the liquid to break up into droplets, which comprises formulating cell culture medium with a water soluble polymer.

Claim 30 (Currently amended): The ~~A~~ method according to claim 1 which comprises applying the cells to the fibre scaffold by subjecting a liquid formulation comprising cell culture medium carrying the cells and a water soluble polymer to an electric field to cause the liquid to break up into droplets or to form at least one fibre.

Claims 31 – 34 (Cancelled)

Claim 35 (Currently amended): The ~~A~~ method according to claim 1 wherein the fibre gap is greater than approximately half the cell diameter.

Claim 35 (Currently amended): The ~~A~~ method according to claim 1 wherein the fibre diameter is less than the fibre gap.

Claims 37-48 (Cancelled)

Claim 49 (Currently amended): The ~~A~~ method according to claim 1, wherein the surface is a target area of a mammalian body such as a wound and the fibre scaffold is produced in situ.

Claim 50 (Currently amended): The ~~A~~ method according to claim 16 wherein the cells are applied by a seeding process.

Claim 51(Currently amended): The ~~A~~ method according to claim 16 wherein the cells are applied by spraying.

Claim 52 (Currently amended): The ~~A~~ method according to claim 26, wherein the target area is a wound.

Claim 53 (Currently amended): The ~~A~~ method according to claim 49, wherein the target area is a wound.